



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,779	08/08/2006	Naoki Yamaguchi	060599	4652
23850	7590	12/31/2008		
KRATZ, QUINTOS & HANSON, LLP			EXAMINER	
1420 K Street, N.W.			CERNOCH, STEVEN MICHAEL	
Suite 400				
WASHINGTON, DC 20005			ART UNIT	PAPER NUMBER
			3752	
			MAIL DATE	DELIVERY MODE
			12/31/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/588,779	YAMAGUCHI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	STEVEN CERNOCH	3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 October 2008.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5 and 7-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 August 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____ .	6) <input type="checkbox"/> Other: _____ .

**DETAILED ACTION**

***Terminal Disclaimer***

The terminal disclaimer does not comply with 37 CFR 1.321(b) and/or (c) because:

An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

***Double Patenting***

All claims of this application conflict with all claims of Application No. 10/588,437, Application No. 10/588758 and Application No. 10/588,729. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

All claims provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all claims of copending Application No. 10/588,437, Application No. 10/588758 and Application No. 10/588,729. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the cited applications claim the same apparatus and methodology and only differ through classification.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2).

Re claim 1, Jeffries et al. shows an electrostatic device (Fig. 7) configured and disposed to electrostatically charge and dispense a liquid composition from a supply to a point of dispense, wherein the device comprises: an actuator (column 10, line 8); a high voltage generator (column 7, lines 5-13) to provide a high voltage; a power source (Fig. 7, 96) to activate said actuator and said high voltage generator; a reservoir (column 5, line 48) to contain the supply of said liquid composition; and a nozzle

(column 6, line 57) to dispense the liquid composition, said nozzle being disposed at the point of dispense; and wherein the reservoir is configured to provide a removable cartridge (Fig. 5, 58), said reservoir being deformable according to inner pressure (column 5, line 48); a switch for manipulating the power source (Fig. 7, 102 &106).

Jeffries et al. does not show a dispensing unit comprising: a suction pump in immediate upstream relation with the reservoir for supplying the liquid composition from the reservoir, said pump being mechanically connected to said actuator to be driven thereby; an emitter electrode to electrostatically charge the liquid composition, the emitter electrode being electrically connected to said high voltage generator; and a selector for providing a spraying mode and a dripping mode selectively in response to the switch being manipulated; wherein the dripping mode is such that said pump is alone actuated to dispense the liquid composition out through the nozzle absent electrical charge, and wherein the spraying mode is such that said pump as well as the emitter electrode are simultaneously activated to dispense the liquid composition out through the nozzle with the liquid composition being electrically charged at the emitter electrode prior to exiting the nozzle, and wherein said selector comprises a handle, a first tact switch, and a second tact switch, said handle being engaged with a switch knob of said switch to be movable therewith, and having a portion selectively engageable with said first and second tact switches, said first tact switch being mounted on a printed board and connected to operate said high voltage generator and said actuator for executing said spraying mode upon being pressed by said handle, and said

second tact switch being mounted on said printed board and connected to operate said actuator for executing said dripping mode upon being pressed by said handle.

However Valaskovic et al. teaches a dispensing unit comprising: a suction pump in immediate upstream relation with the reservoir for supplying the liquid composition from the reservoir (Fig. 10, 2), said pump being mechanically connected to said actuator to be driven thereby; an emitter electrode (4) to electrostatically charge the liquid composition, the emitter electrode being electrically connected to said high voltage generator and a selector (3) for providing a spraying mode and a dripping mode (column 7, lines 63) selectively in response to the switch being manipulated; wherein the dripping mode is such that said pump is alone actuated to dispense the liquid composition out through the nozzle absent electrical charge, and wherein the spraying mode (Fig. 4) is such that said pump as well as the emitter electrode are simultaneously activated to dispense the liquid composition out through the nozzle with the liquid composition being electrically charged at the emitter electrode prior to exiting the nozzle.

Gaw et al. teaches wherein said selector (Fig. 1, 9) comprises a handle, a first tact switch, and a second tact switch (Fig. 9, 9), said handle being engaged with a switch knob of said switch to be movable therewith, and having a portion selectively engageable with said first and second tact switches, said first tact switch being mounted on a printed board and connected to operate said high voltage generator and said actuator for executing said spraying mode upon being pressed by said handle, and said second tact switch being mounted on said printed board and connected to operate said

actuator for executing said dripping mode upon being pressed by said handle (col. 7, lines 31-35).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the pump and electrode of Valaskovic et al. to control the stability of an electrospray process (column 7, lines 40-45) and the switch of Gaw et al. to permit more than one flow rate (col. 7, lines 31-35).

Re claim 2, Jeffries et al. shows wherein said device includes a housing (Fig. 7, 80) which carries said actuator, said high voltage generator, said power source, said switch, and said selector.

Re claim 5, Jeffries et al. shows wherein said housing is formed on its exterior with an indicator which indicates which one of said dripping mode and said spraying mode is selected (column 4, line 68 to column 5, lines 1-3).

Re claim 9, Jeffries et al. shows an outer cover (Fig. 11, 254) detachable to a housing (200) carrying said high voltage generator, said power source, said dispensing unit, said reservoir, said switch, and said selector, said outer cover being formed with a tab (236) which conceals there behind said switch to keep said device inoperative.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 2 above, and further in view of Westerweck et al. (US Pub No 2004/0057720).

Re claim 3, Jeffries et al. does not show wherein said selector is exposed on the exterior of said housing to be manipulated by the user's finger, said selector being movable between a dripping position defining said dripping mode and a spraying position defining said spraying mode, said selector surrounding said switch in immediately adjacent relation thereto and rotatable about an axis between said dripping position and said spraying position.

However Westerweck et al. does teach wherein said selector (Fig. 4, 20 & 22) is exposed on the exterior of said housing to be manipulated by the user's finger, said selector being movable (paragraph 0027, lines 3-4) between a dripping position defining said dripping mode and a spraying position defining said spraying mode, said selector surrounding said switch (Fig. 4, 22) in immediately adjacent relation thereto and rotatable about an axis between said dripping position and said spraying position.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the switches of Westerweck et al. to reduce the amount of real estate required by the switch (paragraph 0007).

Re claim 4, Jeffries et al. does not show wherein said selector has a lock position which prohibits said motor and the emitter electrode from being activated.

However Westerweck et al. does show wherein said selector has a lock position which prohibits said motor and the emitter electrode from being activated (Paragraph 0028, lines 5-8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the switch lock of Westerweck et al. to assist in capturing the switch (paragraph 0030, lines 1-5).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 2 above, and further in view of Coffee et al. (US Pat No 6,595,208 B1).

Re claim 7, Jeffries et al. does not show wherein said spraying mode is arranged to start activating said pump after a delay from activating said high voltage generator.

However Coffee et al. does teach wherein said spraying mode is arranged to start activating said pump after a delay from activating said high voltage generator (column 3, lines 35-41)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the delay of Coffee et al. to allow a buildup to occur (column 3, lines 40-41).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al (US Pat No 5,221,050) in view of Gaw et al. (US Pat No 6,318,647 B1) in further view of Valaskovic et al. (US Pat No 6,744,046 B2) as applied to claim 1 above, and further in view of Doebler et al. (US Pub No 2002/0100815).

Re claim 8, Jeffries et al. does not teach wherein said spraying mode is arranged to include monitoring of the high voltage output from said high voltage generator and to

cease activating said high voltage generator and said pump when said monitored high voltage output exceeds a critical level.

However Doebler et al. does teach wherein said spraying mode is arranged to include monitoring of the high voltage output from said high voltage generator and to cease activating said high voltage generator and said pump when said monitored high voltage output exceeds a critical level (paragraph 0043, lines 3-20).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the sprayer of Jeffries et al. with the voltage monitor of Doebler et al. in order to control any errors (paragraph 0043, lines 11-20).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./  
Examiner, Art Unit 3752

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752